

FORM 1 -- Linearity and Stability Tests Recordkeeping Form For Portable Analyzers

RULE 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines

ANALYZER(Make/Model)

Analyzer S/N:

OPERATOR

Date of Last Linearity Check

Date of Last Stability Check

Requirement Linearity less than or equal to 3% of the mid span gas concentration

Requirement Response either less than or equal to 1% of Span start for 15 min or 2.5 percent for 30 min

Linearity check must be conducted within 12 months of the test date

Stability check must be conducted within 12 months of the test date

Linearity Check

Date of Linearity Check

Stability Check

Date of Stability Check:

Constituent	CO (ppm)	NO (ppm)	NO ₂ (ppm)	O ₂ (ppm)
Zero Gas				
Mid Span Gas				
High Span Gas				
Reading, Zero				
Reading, Mid				
Reading, High				
Linearity, E _{LIN} , %				
Slope =				
Calculated Mid				

Calculations for Linearity are described in Section 3.6 of the Periodic Monitoring Protocol

Constituent	CO (ppm)	NO (ppm)	NO ₂ (ppm)	O ₂ (ppm)
Reading, Span Start				
Reading, 15 min				
Reading, 30 min				
Stability, %, 15 min				
Stability, %, 30 min				

Stability fraction is the absolute difference between the initial and final reading divided by the start reading. The stability percentage is the stability fraction times 100.

CERTIFICATION: Based on the information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, accurate, complete and representative of the emissions from this source.

Test Conducted By

Signature

Title

Date

FORM 2 CALIBRATION RECORDKEEPING

☐ Pre-Test Calibration ☐ Post-Test Calibration

RULE 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines

DATE: _____ TIME (start/stop): _____ / _____ NAME: _____

MONITOR: _____

Gas Constituent	Cylinder	Expiration Date	Cylinder Conc.	Reading 1	Reading 2	Reading 3	Reading 4

**If the reading is re-calibrated, then put an "R" next to it in the box*

FORM 3 -- Periodic Monitoring Recordkeeping Form For Portable Analyzers

RULE 1110.2 Emissions from Gaseous- and Liquid-Fueled Engines

FACILITY NAME:

Facility ID Number:

Engine Name:

Permit to Operate:

Application No.:

ANALYZER (Make/Model):

Analyzer S/N:

Date of Last Stability Check¹:

Date of Last Linearity Check²:

1. Stability check must be conducted within 12 months of test date

2. Linearity check must be conducted within 12 months of test date

"As Found" PM Test Results

Time Start:

Date:

Time End:

Constituent	CO (ppm)	NO (ppm)	NO ₂ (ppm)	O ₂ (ppm)
Measured, C _{MEAS}				
Cal Adjusted, C _{CORR}				

Example

Calculation: $C_{ADJ} = (C_{MEAS} - C_{CZ}) \times \left(\frac{C_{CAL} - C_{CZ}}{C_{CM} - C_{CZ}} \right)$

Constituent	CO (ppm)	NO _x (ppm)
C _{ADJ} @ 15% O ₂ , N		
Compliance Limit		
Difference		

In Compliance?

☐ Yes ☐ No, Call 1-800-

CUT-SMOG within 1 hr. if not in compliance

Calibration Results

Date of Pre-Test Calibration:

Date of Post-Test Calibration:

Constituent	CO (ppm)	NO (ppm)	NO ₂ (ppm)	O ₂ (ppm)
Pre-Test Zero				
Post-Test Zero				
Mean Zero, C _{CZ}				
Span Gas, C _{CAL}				
Pre-Test Span				
Post-Test Span				
Mean Span, C _{CM}				
Drift, %				

Drift Calculation is listed in Section 3.6, Periodic Monitoring Protocol

CO Interference Response, NO Gas		
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"As Left" PM Test Results

Time Start:

Date:

Time End:

Constituent	CO (ppm)	NO (ppm)	NO ₂ (ppm)	O ₂ (ppm)
Measured, C _{MEAS}				
Cal Adjusted, C _{ADJ}				

Constituent	CO (ppm)	NO _x (ppm)
C _{ADJ} @ 15% O ₂ , N		
Compliance Limit		
Difference		

In Compliance?

☐ Yes ☐ No, Call 1-800-

CUT-SMOG within 1 hr. if not in compliance

Describe any engine or control system maintenance or tuning conducted after the "As Found" Test to bring the engine into compliance (attach additional documentation as necessary):

CERTIFICATION: Based on the information and belief formed after reasonable inquiry, I certify that the statements and information contained in this report are true, accurate, complete and representative of the emissions from this source.

Test Conducted By

Signature

Title

Date